



HARTNETT-PACKARD COMPANY
Intellectual Property Administration
P.O. Box 272400
Fort Collins, Colorado 80527-2400

PATENT APPLICATION

ATTORNEY DOCKET NO. 200209079-1

IN THE
UNITED STATES PATENT AND TRADEMARK OFFICE

Inventor(s): Fred HARTNETT, et al.

Confirmation No.: 9165

Application No.: 10/686,699

Examiner: Tang, Minh Nhut

Filing Date: October 16, 2003

Group Art Unit: 2829

Title: ELECTRONIC CIRCUIT ASSEMBLY TEST APPARATUS

Mail Stop Appeal Brief-Patents
Commissioner For Patents
PO Box 1450
Alexandria, VA 22313-1450

TRANSMITTAL OF APPEAL BRIEF

Transmitted herewith is the Appeal Brief in this application with respect to the Notice of Appeal filed on April 23, 2007.

The fee for filing this Appeal Brief is (37 CFR 1.17(c)) \$500.00.

(complete (a) or (b) as applicable)

The proceedings herein are for a patent application and the provisions of 37 CFR 1.136(a) apply.

☐ (a) Applicant petitions for an extension of time under 37 CFR 1.136 (fees: 37 CFR 1.17(a)-(d)) for the total number of months checked below:

☐ 1st Month
\$120

☐ 2nd Month
\$450

☐ 3rd Month
\$1020

☐ 4th Month
\$1590

☐ The extension fee has already been filed in this application.

☒ (b) Applicant believes that no extension of time is required. However, this conditional petition is being made to provide for the possibility that applicant has inadvertently overlooked the need for a petition and fee for extension of time.

Please charge to Deposit Account 08-2025 the sum of \$ 500. At any time during the pendency of this application, please charge any fees required or credit any over payment to Deposit Account 08-2025 pursuant to 37 CFR 1.25. Additionally please charge any fees to Deposit Account 08-2025 under 37 CFR 1.16 through 1.21 inclusive, and any other sections in Title 37 of the Code of Federal Regulations that may regulate fees.

☒ A duplicate copy of this transmittal letter is enclosed.

☒ I hereby certify that this correspondence is being deposited with the United States Postal Service as first class mail in an envelope addressed to:
Commissioner for Patents, Alexandria, VA 22313-1450
Date of Deposit: June 22, 2007

OR

☐ I hereby certify that this paper is being transmitted to the Patent and Trademark Office facsimile number (571)273-8300.

Date of facsimile:

Typed Name: Cindy C. Dioso

Signature: Cindy C. Dioso

Respectfully submitted,

Fred HARTNETT, et al.

By Hope C. Shimabuku

Hope C. Shimabuku

Attorney/Agent for Applicant(s)

Reg No. : 57,072

Date : June 22, 2007

Telephone : 214-855-7530



IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

**APPEAL FROM THE APPELLEE TO THE BOARD
OF PATENT APPEALS AND INTERFERENCES**

Applicant of: Fred Hartnett, et. al. Confirmation No.: 9165

Serial No.: 10/686,699

Filing Date: October 16, 2003

Group Art Unit: 2829

Appellee: Tang, Minh Nhut

Title: ELECTRONIC CIRCUIT ASSEMBLY TEST APPARATUS

Docket No.: 200209079-1

MAIL STOP: APPEAL BRIEF PATENTS
Commissioner for Patents
P.O. Box 1450
Alexandria, Virginia 22313-1450

Dear Sir:

APPEAL BRIEF

Appellants have appealed to the Board of Patent Appeals and Interferences from the decision of the Appellee mailed January 23, 2007. Appellants filed a Notice of Appeal on April 23, 2007. Appellants respectfully submit herewith this Appeal Brief with authorization to charge the statutory fee of \$500.00.

06/26/2007 HVUONG1 00000015 082025 10686699

01 FC:1402 500.00 DA

REAL PARTY IN INTEREST

The present application was assigned to Hewlett-Packard Development Company, L.P. as indicated by an assignment from Hewlett-Packard Company recorded on April 21, 2005 in the Assignment Records of the United States Patent and Trademark Office at Reel 014096, Frame 0802. The real party in interest is Hewlett-Packard Development Company, LP, a limited partnership established under the laws of the State of Texas and having a principal place of business at 20555 S.H. 249 Houston, TX 77070, U.S.A. (hereinafter "HPDC"). HPDC is a Texas limited partnership and is a wholly-owned affiliate of Hewlett-Packard Company, a Delaware Corporation, headquartered in Palo Alto, CA. The general or managing partner of HPDC is HPQ Holdings, LLC.

RELATED APPEALS AND INTERFERENCES

There are no known appeals or interferences that will directly affect or be directly affected by or have a bearing on the Board's decision in this pending appeal.

STATUS OF CLAIMS

Claims 9, 10, 12-13, 28, and 30-33 stand rejected, and claims 11 and 29 stand objected to, pursuant to an Office Action mailed January 23, 2007. Claims 1-8 are considered allowable. Claims 14-27 have been cancelled without prejudice or disclaimer. Claims 9, 10, 12-13, 28, and 30-33 are presented for appeal as Claims 9, 10, 12-13, 28, and 30-33 have been at least twice rejected.

STATUS OF AMENDMENTS

No amendment has been filed subsequent to the mailing of the Office Action dated January 23, 2007.

SUMMARY OF CLAIMED SUBJECT MATTER

Embodiments of the present invention as defined by independent Claim 9 are directed toward an electronic circuit assembly test apparatus (10) comprising a first probe means (30) coupled to a support member (32) and adapted to contact corresponding test areas (76) on an electronic circuit assembly (11); a support means (44, 45) movably coupled to the support member (32); and a second probe means (40, 42) coupled to the support means (44, 45) and configured to contact test areas (70) on the electronic circuit assembly (11) different than the test areas (76) contacted by the first probe means (30), the second probe means (40,42) having

a spacing density of probes (42) greater than a spacing density of probes (30) of the first probe means (30). (at least at page 3, line 9 through page 4, line 29; page 5, line 26 through page 6, line 5; figures 1, 2A, 2B, 3, and 4).

Embodiments of the present invention as defined by Claim 13 are directed toward the invention as defined in Claim 9 further comprising means for limiting (52, 62) travel of the second probe means (40,42) toward the electronic circuit assembly (11). (at least at page 4, line 30 through page 6, line 2; figures 1, 2A, 2, 3, and 4).

Embodiments of the present invention as defined by independent Claim 28 are directed toward an electronic circuit assembly test apparatus (10) comprising a support member (32) having a plurality of probes (30) configured to contact a first plurality of test areas (76) of an electronic circuit assembly (11); and a probe assembly (40) having a probe assembly support (44) movably coupled to the support member (32), the probe assembly (40) having a plurality of probes (42) coupled to the probe assembly support (44) and configured to contact a second plurality of test areas (70) of the electronic circuit assembly (11), wherein the probes (42) of the probe assembly (40) are spaced to accommodate a spacing density of the second plurality of test areas (70) greater than a spacing density of the first plurality of test areas (76). (at least at page 3, line 9 through page 4, line 29; page 5, line 26 through page 6, line 5; figures 1, 2A, 2B, 3, and 4).

Embodiments of the present invention as defined by Claim 30 are directed toward the invention as defined in Claim 28, wherein the probe assembly (40) comprises at least one alignment guide (50) adapted to cooperate with an alignment guide (72) disposed on the electronic circuit assembly (11). (at least at page 4, line 30 through page 6, line 5; figures 1, 2A, and 2B).

Embodiments of the present invention as defined by Claim 31 are directed toward the invention as defined in Claim 28, wherein the probe assembly (40) comprises at least one limiter (52) adapted to limit movement of the probes (42) of the probe assembly (40) toward the electronic circuit assembly (11). (at least at page 5, line 12-25; figures 1 and 3).

Embodiments of the present invention as defined by Claim 33 are directed toward the invention as defined in Claim 28 further comprising at least one spring (102) disposed between the probe assembly (40) and the support member (32). (at least at page 6, line 28 through page 7, line 13; figure 4).

GROUND OF REJECTION TO BE REVIEWED ON APPEAL

1. Claims 9-10, 12, 28 and 32 are rejected under 35 U.S.C. §102(b) as being anticipated by U.S. Patent No. 6,437,587 issued to Hartnett (hereinafter "*Hartnett*").
2. Claims 13 and 31 are rejected under 35 U.S.C. §103(a) as being unpatentable over *Hartnett* in view of U.S. Patent No. 6,028,437 issued to Potter (hereinafter "*Potter*").
3. Claim 30 was rejected under 35 USC §103(a) as being unpatentable over *Hartnett* in view of U.S. Patent No. 6,885,205 issued to Siew et al. (hereinafter "*Siew*").
4. Claim 33 was rejected under 35 USC §103(a) as being unpatentable over *Hartnett* in view of U.S. Patent No. 5,698,990 issued to Aussant et al. (hereinafter "*Aussant*").

ARGUMENT

A. Standard

1. 35 U.S.C. § 102

Under 35 U.S.C. § 102, a claim is anticipated only if each and every element as set forth in the claim is found in a single prior art reference. *Verdegaal Bros. v. Union Oil Co. of California*, 2 U.S.P.Q.2d 1051 (Fed. Cir. 1987); M.P.E.P. § 2131. In addition, "[t]he identical invention must be shown in as complete detail as is contained in the . . . claims" and "[t]he elements must be arranged as required by the claim." *Richardson v. Suzuki Motor Co.*, 9 U.S.P.Q.2d 1913, 1920 (Fed. Cir. 1989); *In re Bond*, 15 U.S.P.Q.2d 1566 (Fed. Cir. 1990); M.P.E.P. § 2131.

2. 35 U.S.C. § 103

To establish a *prima facie* case of obviousness under 35 U.S.C. § 103, three basic criteria must be met: First, there must be some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the reference or to combine reference teachings; second, there must be a reasonable expectation of success; and finally, the prior art reference (or references when combined) must teach or suggest all the claim limitations. *In re Vaeck*, 947 F.2d 488, (Fed. Cir. 1991); M.P.E.P. § 2143. The teaching or suggestion to make the claimed combination and the reasonable expectation of success must both be found in the prior art, and not based on applicant's disclosure. *Id.* Further, the mere fact that references can be combined or modified does not

render the resultant combination obvious unless the prior art also suggests the desirability of the combination. *In re Mills*, 916 F.2d 680 (Fed. Cir. 1990); M.P.E.P. § 2143.01. Additionally, not only must there be a suggestion to combine the functional or operational aspects of the combined references, but also the prior art is required to suggest both the combination of elements and the structure resulting from the combination. *Stiftung v. Renishaw PLC*, 945 F.2d 1173, 1183 (Fed. Cir. 1991). Moreover, where there is no apparent disadvantage present in a particular prior art reference, then generally there can be no motivation to combine the teaching of another reference with the particular prior art reference. *Winner Int'l Royalty Corp. v. Wang*, 202 F.3d 1340, 1349 (Fed. Cir. 2000).

B. Argument

1. Rejection over *Hartnett* under 35 U.S.C. §102(b)

a. Claims 9, 10, and 12

Claims 9, 10, and 12 are rejected under 35 U.S.C. §102(b) as being anticipated by *Hartnett*. Of the rejected claims, Claim 9 is independent. Appellants respectfully submit that independent Claim 9 is patentable over the cited reference and, thus, remaining Claims 10 and 12, which depend from independent Claim 9, are also patentable.

Regarding Claim 9, Appellants respectfully submit that *Hartnett* does not disclose or even suggest each and every limitation of independent Claim 9. For example, *Hartnett* does not disclose or even suggest a "support means movably coupled to the support member" as recited in Claim 9 (emphasis added). In the Office Action dated January 23, 2007, the Appellee appears to assert that the above-referenced limitation of Claim 9 is disclosed in *Hartnett* because the probe assembly 20 in the *Hartnett* device is movable in order to enable the probe assembly 20 to make electrical contact with board pads 34. (Office Action dated January 23, 2007, page 2). Appellants respectfully disagree.

Hartnett appears to describe a probe assembly 20 with test pins 22 mounted to a board 18. (*Hartnett*, column 2, line 66 through column 3, line 2). In the Office Action dated January 23, 2007, the Appellee considers the board 18 of *Hartnett* to correspond to the "support member" recited by Claim 9 and the probe assembly 20 of *Hartnett* as corresponding to the "support means" recited by Claim 9. (Office Action dated January 23, 2007, page 2). Probe assembly 20 of *Hartnett* appears to include a number of electrically conductive elements 42 each comprising a front and back surface contact pad 26 and 30. (*Hartnett*, column 5, lines 8-

12). The probe assembly 20 of *Hartnett* appears to be attached to the board 18 of *Hartnett* so that the contact pads 30 of the probe assembly 20 of *Hartnett* are in contact with board pads 34 on the board 18 of *Hartnett*. (*Hartnett*, column 6, lines 41-45). Nowhere in *Hartnett* is there any disclosure or even any suggestion that the probe assembly 20 of *Hartnett* is “movably coupled” to the board 18 of *Hartnett*. Furthermore, contrary to the Appellee’s assertion, placing the probe assembly 20 of *Hartnett* into contact with the board 18 of *Hartnett* so that the test fixture 10 of *Hartnett* can be used to test a printed circuit assembly 12 of *Hartnett* does not make probe device 20 of *Hartnett* “movably coupled” to the board 18 of *Hartnett*. (See Office Action dated January 23, 2007, page 2). To the contrary, once the probe assembly 20 of *Hartnett* is brought into engagement with the board 18 of *Hartnett*, the probe assembly 20 of *Hartnett* appears to remain in a fixed position relative to the board 18 of *Hartnett*. (See *Hartnett*, figure 3). Therefore, *Hartnett* does not appear to disclose or even suggest a “support means movably coupled to the support member” as recited in Claim 9. Accordingly, for at least this reason, Appellants respectfully submit that *Hartnett* does not anticipate Claim 9.

Claims 10 and 12 depend from independent Claims 9 and, therefore, are also patentable over *Hartnett* at least because they incorporate the limitations of Claim 9. Accordingly for at least the reasons discussed above, Appellants respectfully submit that Claims 9, 10, and 12 are patentable over *Hartnett*.

b. Claims 28 and 32

Claims 28 and 32 are rejected under 35 U.S.C. §102(b) as being anticipated by *Hartnett*. Of the rejected claims, Claim 28 is independent. Appellants respectfully submit that independent Claim 28 is patentable over the cited reference and, thus, remaining Claim 32, which depends from independent Claim 28, is also patentable.

Regarding Claim 28, Appellants respectfully submit that *Hartnett* does not disclose or even suggest each and every limitation of independent Claim 28. For example, *Hartnett* does not disclose or even suggest a “probe assembly having a probe assembly support movably coupled to the support member” as recited in Claim 28 (emphasis added). In the Office Action dated January 23, 2007, the Appellee appears to assert that the above-referenced limitation of Claim 28 is disclosed in *Hartnett* because the probe assembly 20 in the *Hartnett* device is movable in order to enable the probe assembly 20 to make electrical contact with board pads 34. (Office Action dated January 23, 2007, page 3). Appellants respectfully disagree.

Hartnett appears to describe a probe assembly 20 and test pins 22 mounted to a board 18. (*Hartnett*, column 2, line 66 through column 3, line 2). In the Office Action dated January 23, 2007, the Appellee considers the board 18 of *Hartnett* to correspond to the “support member” recited by Claim 9, and the probe assembly 20 of *Hartnett* as corresponding to the “support means” recited by Claim 9. (Office Action dated January 23, 2007, page 2). Probe assembly 20 of *Hartnett* appears to include a number of electrically conductive elements 42 each comprising a front and back surface contact pad 26 and 30. (*Hartnett*, column 5, lines 8-12). The probe assembly 20 of *Hartnett* appears to be attached to the board 18 of *Hartnett* so that the contact pads 30 of the probe assembly 20 of *Hartnett* are in contact with board pads 34 on the board 18 of *Hartnett*. (*Hartnett*, column 6, lines 41-45). Nowhere in *Hartnett* is there any disclosure or even any suggestion that the probe assembly 20 of *Hartnett* is “movably coupled” to the board 18 of *Hartnett*. Furthermore, contrary to the Appellee’s assertion, placing the probe assembly 20 of *Hartnett* into contact with the board 18 of *Hartnett* so that the test fixture 10 of *Hartnett* can be used to test a printed circuit assembly 12 of *Hartnett* does not make probe device 20 of *Hartnett* “movably coupled” to the board 18 of *Hartnett*. (See Office Action dated January 23, 2007, page 2). To the contrary, once the probe assembly 20 of *Hartnett* is brought into engagement with the board 18 of *Hartnett*, the probe assembly 20 of *Hartnett* appears to remain in a fixed position relative to the board 18 of *Hartnett*. (See *Hartnett*, figure 3). Therefore, *Hartnett* does not appear to disclose or even suggest a “probe assembly having a probe assembly support movably coupled to the support member” as recited in Claim 28. Accordingly, for at least this reason, Appellants respectfully submit that *Hartnett* does not anticipate Claim 28.

Claim 32 depends from independent Claim 28 and, therefore, is also patentable over *Hartnett* at least the because it incorporates the limitations of Claim 28. Accordingly, Appellants respectfully submit that Claims 28 and 32 are patentable over *Hartnett*.

2. Rejection under 35 U.S.C. § 103(a) over *Hartnett* in view of *Potter*
- a. Claim 13

Claim 13 is rejected under 35 U.S.C. §103(a) as being unpatentable in view of *Hartnett* in view of U.S. Patent No. 6,028,437 issued to Potter (hereinafter “*Potter*”). Appellants respectfully submit that Claim 13 is patentable over *Hartnett* in view of *Potter* and is therefore allowable.

Claim 13 depends from independent Claim 9. Appellants repeat and incorporate herein the arguments presented above in connection with independent Claim 9 such that *Hartnett* does not disclose or even suggest all the limitations of Claim 9 and, therefore, *Hartnett* does not disclose or even suggest all the limitations of Claim 13 which depends from Claim 9. Further, the Appellee does not rely on *Potter* to remedy, nor does *Potter* appear to remedy, at least the deficiencies of *Hartnett* indicated above. Therefore, for at least this reason, Claim 13 is patentable over *Hartnett* in view of *Potter*.

b. Claim 31

Claim 31 is rejected under 35 U.S.C. §103(a) as being unpatentable in view of *Hartnett* in view *Potter*. Appellants respectfully submit that Claim 31 is patentable over *Hartnett* in view of *Potter* and is therefore allowable.

Claim 31 depends from independent Claim 28. Appellants repeat and incorporate herein the arguments presented above in connection with independent Claim 28 such that *Hartnett* does not disclose or even suggest all the limitations of Claim 28 and, therefore, *Hartnett* does not disclose or even suggest all the limitations of Claim 31 which depends from Claim 28. Further, the Appellee does not rely on *Potter* to remedy, nor does *Potter* appear to remedy, at least the deficiencies of *Hartnett* indicated above. Therefore, for at least this reason, Claim 31 is patentable over *Hartnett* in view of *Potter*.

3. Rejection under 35 U.S.C. § 103(a) over *Hartnett* in view of *Siew*

a. Claim 30

Claim 30 was rejected under 35 USC §103(a) as being unpatentable over *Hartnett* in view of U.S. Patent No. 6,885,205 issued to Siew et al. (hereinafter "*Siew*"). Appellants respectfully submit that Claim 30 is patentable over *Hartnett* in view of *Siew* and is therefore allowable.

Claim 30 depends from independent Claim 28. Appellants repeat and incorporate herein the arguments presented above in connection with independent Claim 28 such that *Hartnett* does not disclose or even suggest all the limitations of Claim 28 and, therefore, *Hartnett* does not disclose or even suggest all the limitations of Claim 30 which depends from Claim 28. Further, the Appellee does not rely on *Siew* to remedy, nor does *Siew* appear to

remedy, at least the deficiencies of *Hartnett* indicated above. Therefore, at least for at least this reason, Claim 30 is patentable over *Hartnett* in view of *Siew*.

4. Rejection under 35 U.S.C. § 103(a) over *Hartnett* in view of *Aussant*
a. Claim 33

Claim 33 was rejected under 35 USC §103(a) as being unpatentable over *Hartnett* in view of U.S. Patent No. 5,698,990 issued to *Aussant* et al. (hereinafter "*Aussant*"). Appellants respectfully submit that Claim 33 is patentable over *Hartnett* in view of *Aussant* and is therefore allowable.

Claim 33 depends from independent Claim 28. Appellants repeat and incorporate herein the arguments presented above in connection with independent Claim 28 such that *Hartnett* does not disclose or even suggest all the limitations of Claim 28 and, therefore, *Hartnett* does not disclose or even suggest all the limitations of Claim 30 which depends from Claim 28. Further, the Appellee does not rely on *Aussant* to remedy, nor does *Aussant* appear to remedy, at least the deficiencies of *Hartnett* indicated above. Accordingly, for at least this reason, Claim 30 is patentable over *Hartnett* in view of *Aussant*.

Appellants further submit that there is no motivation or suggestion to modify the *Hartnett* reference to include "at least one spring disposed between the probe assembly and the support member" as recited by Claim 33. For example, in the Office Action (with respect to Claim 33), the Appellee states that it would have been obvious to modify the *Hartnett* apparatus to provide a spring to the probe assembly 20 of *Hartnett* to add flexibility in the test fixture design (Office Action dated January 23, 2007, page 5). Appellants respectfully disagree. *Aussant* appears to disclose counterforce spring assemblies 10a and 10b arranged about a periphery of a gasket 58 as well as dispersed between component leads on a unit under test (*Aussant*, column 4, lines 5-16, figures 1 and 2). *Aussant* also appears to disclose that the *Aussant* apparatus includes a probe plate 54 and a top plate 56 such that the spring assemblies 10 of *Aussant* extend through the probe plate 54 to exert a bias on the top plate 56 (*Aussant*, column 4, lines 26-31). *Aussant* also appears to recite that in a testing mode, a vacuum is introduced between the top plate 56 and the probe plate 54 to draw the top plate toward the probe plate (*Aussant*, column 6, lines 15-20, figure 4). *Aussant* recites:

The presence of counterforce spring assemblies 10b about the periphery of gasket 58 creates an immediate seal at gasket 58 upon creation of a vacuum between top plate 56 and probe plate 54 because counterforce spring assemblies 10b provide additional support in a region of gasket 58 to give it better sealing contact between UUT 60 and top plate 56.

(*Aussant*, column 4, lines 43-49) (emphasis added). Further, *Aussant* recites:

[T]hese assemblies 10 may be placed in a wide variety of areas directly below the UUT 60 itself to ensure that no bowing or bending occurs during the testing process when a vacuum exists between probe plate 54 and top plate 56.

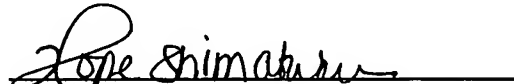
(*Aussant*, column 4, lines 63-67) (emphasis added). There is no gasket disclosed in the *Hartnett* apparatus, nor is there any vacuum applied in the *Hartnett* apparatus. Nor does there appear to be any reason to include such gasket and vacuum in the *Hartnett* apparatus. Accordingly, there is no motivation or suggestion to modify the *Hartnett* apparatus as proposed by the Appellee. Therefore, for at least this reason also, Claim 33 is allowable.

CONCLUSION

Appellants have demonstrated that the present invention as claimed is clearly distinguishable over the art cited of record. Therefore, Appellants respectfully request the Board of Patent Appeals and Interferences to reverse the final rejection of the Appellee and instruct the Appellee to issue a notice of allowance of all claims.

The Commissioner is authorized to charge the statutory fee of \$500.00 to Deposit Account No. 08-2025 of Hewlett-Packard Company. Although no other fee is believed due, the Commissioner is hereby authorized to charge any fees or credit any overpayments to Deposit Account No. 08-2025 of Hewlett-Packard Company.

Respectfully submitted,


Hope Shimabuku
Registration No. 57,072

Date: June 22, 2007

Correspondence To:

Hewlett-Packard Company
Intellectual Property Administration
P.O. Box 272400
Fort Collins, Colorado 80527-2400
Tel. (970) 898-3884

CLAIMS APPENDIX

9. An electronic circuit assembly test apparatus, comprising:
- first probe means coupled to a support member and adapted to contact corresponding test areas on an electronic circuit assembly;
- support means movably coupled to the support member; and
- second probe means coupled to the support means and configured to contact test areas on the electronic circuit assembly different than the test areas contacted by the first probe means, the second probe means having a spacing density of probes greater than a spacing density of probes of the first probe means.
10. The apparatus of Claim 9, wherein the support means is movably coupled to the support member to enable non-lateral movement of the support means relative to the support member.
12. The apparatus of Claim 9, further comprising means for aligning the second probe means with corresponding test areas of the electronic circuit assembly.
13. The apparatus of Claim 9, further comprising means for limiting travel of the second probe means toward the electronic circuit assembly.
28. An electronic circuit assembly test apparatus, comprising:
- a support member having a plurality of probes configured to contact a first plurality of test areas of an electronic circuit assembly; and
- a probe assembly having a probe assembly support movably coupled to the support member, the probe assembly having a plurality of probes coupled to the probe assembly support and configured to contact a second plurality of test areas of the electronic circuit assembly, wherein the probes of the probe assembly are spaced to accommodate a spacing

density of the second plurality of test areas greater than a spacing density of the first plurality of test areas.

30. The apparatus of Claim 28, wherein the probe assembly comprises at least one alignment guide adapted to cooperate with an alignment guide disposed on the electronic circuit assembly.

31. The apparatus of Claim 28, wherein the probe assembly comprises at least one limiter adapted to limit movement of the probes of the probe assembly toward the electronic circuit assembly.

32. The apparatus of Claim 28, wherein the probe assembly support is movably coupled to the support member to provide non-lateral movement of the probe assembly relative to the support member.

33. The apparatus of Claim 28, further comprising at least one spring disposed between the probe assembly and the support member.

EVIDENCE APPENDIX

None

RELATED PROCEEDINGS APPENDIX

None